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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/654,409	09/03/2003	Alexander Raphalovitz	910326-41	5455

7590 11/05/2004

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EXAMINER

SUMMONS, BARBARA

ART UNIT PAPER NUMBER

2817

DATE MAILED: 11/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/654,409

Applicant(s)

RAPHALOVITZ ET AL.

Examiner

Barbara Summons

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to because reference signs "50" and "20" have been used in association with Fig. 1 to identify a "metal band" damper and a "folded end", respectively (see page 4, lines 13-14), but these reference signs do not appear to be pointing to such structures in Fig. 2. Reference signs "50" and "20" are not discussed in association with Fig. 2, but must either be deleted from Fig. 2, or the corresponding structures of a "metal band" damper and a "folded end" must be shown in Fig. 2 with the corresponding reference signs pointing thereto.
2. The drawings are further objected to because there are two reference signs "130" in Fig. 2, one pointing to a "return pin" and the other pointing with a dashed line toward the "pick-up coil 150". It is unclear what structure the reference sign "130" with the dashed line is intended to indicate. Furthermore, a reference sign must not be used to indicate two different structures. It appears that the second reference sign "130" with the dashed line should be deleted, or a different reference sign should be used and a discussion provided in the specification of what structure this dashed line is indicating.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

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changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The claims recite "a mode converter" (see claim 1, line 4 and claim 2, line 2 and claim 3, line 3) which lacks antecedent basis in the specification. Thus a description of and the terminology "mode converter" must be added to the specification. It appears that the claimed "mode converter" is the "pick-up coil 70".

4. The disclosure is objected to because of the following informalities: On page 5, on line 12, "finished" should be - - finish - -. On page 5, on lines 12-13, it appears that "start pin 140" should correctly be - - start pin 190 - - (see Fig. 2) since there is no reference sign "140" in Fig. 2. On page 5, on line 24, note that "coil leads 190, 200" should be changed to - - start and finish pins 190, 200 - - (see lines 12-13) in order to maintain consistent terminology in identifying the reference signs.

Appropriate correction is required.

***Claim Objections***

5. Claim 2 is objected to because of the following informalities:

Claim 2 does not end in a period. Claim 2 ends with "and". Is some text missing from claim 2? It also appears that a noun (- - the waveguide - -?) is missing before "supports" on line 3. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-3 are rejected under 35 U.S.C. § 102(b) as being anticipated by Chamuel U.S. 4,121,155.

Fig. 6 of Chamuel discloses a magnetostrictive device, comprising: a magnetostrictive nickel waveguide 40 (see e.g. col. 8, line 39), the waveguide being folded and forming two substantially parallel legs 40A and 40B; a mode converter 41 and/or 42 (i.e. a transducer for converting an electrical mode to an acoustic/sonic mode or vice versa); and the legs 40A and 40B being electrically insulated from each other at least by the air in between them since the device would not function with the legs 40A and 40B contacting each other. Additionally, although the mode converters 41 and 42 are not shown "surrounding" a portion of the legs 40A and 40B, Chamuel has incorporated by reference U.S. 4,035,762 (see col. 1, lines 15-19), and discloses that

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the transducer/mode converters can take any known form (see col. 3, lines 23-28) which includes coils surrounding the legs as shown, in Chamuel '762 Fig. 3. Regarding claim 2, the mode converter/transducers 41 and 42 are located at the farthest distance from the fold of the waveguide, and the waveguide supports a sonic pulse (see col. 5, lines 34-35 and col. 8, line 44) in response to a current pulse applied to the waveguide from pulse generator 44 via mode converter/transducer 41. Regarding claim 3, the mode converter/transducer 42 supplies an electrical output in response to the sonic pulse traveling down the waveguide.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Chamuel U.S. 4,035,762 was incorporated by reference in the Patent to Chamuel applied above and shows the different structures of the mode converter/transducers in Figs. 3(A) through 3(I).

Powell U.S. 2,863,121 also shows a folded magnetostrictive waveguide 16 that is folded at 31 and has mode converters/transducers 20 and 30 for output and 11 for input from a pulse generator.

Nyce et al. U.S. 6,426,618 also shows a folded magnetostrictive waveguide 9.

Tellerman U.S. 3,898,555 was cited by Applicants as prior art in their specification (see page 1).

Ehling et al. U.S. 5,923,164 shows a prior art device similar to that of Tellerman.

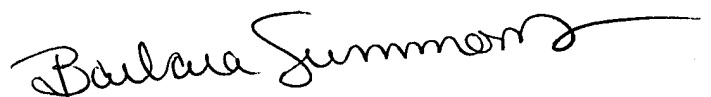
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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barbara Summons whose telephone number is (571) 272-1771. The examiner can normally be reached on M-Th, M-Fr.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bob Pascal can be reached on (571) 271-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

bs  
November 2, 2004

A handwritten signature in black ink that reads "Barbara Summons". The signature is fluid and cursive, with a long horizontal line extending from the end of the name.

**BARBARA SUMMONS  
PRIMARY EXAMINER**